

(f) The development will retain natural areas and regenerate those natural areas which are already degraded

Up to 53.5% of the subject land (i.e. 16.7ha) will remain untouched and will be retained as part of a bushland and drainage corridor. Opportunities are also presented to implement a management strategy to protect the dune and headland areas from exotic weed infestations and uncontrolled pedestrian incursions that may disturb the stability of emerging native coastal vegetation species. Furthermore, the progressive rehabilitation and maintenance of degraded Community Property areas and the degraded dune areas will be the function of the Community Title Scheme's Community Association. The proposal is therefore consistent with the aim to encourage retention of natural areas and regeneration of those natural areas which are already degraded.

4.2.1.4 Cl. 32B(2)(a) NSW Coastal Policy

Table 2 of Appendix C in Part C of the NSW Coastal Policy 1997 lists the provisions of the policy which are relevant to development control, and should be considered as a minimum by consent authorities when assessing development applications. A Table 2 assessment of the development proposal is tabulated below: -

Table 7: NSW Coastal Policy Table 2 Assessment of Proposal

STRATEGIC ACTION NO.	SUMMARY PROVISION	ASSESSMENT
1.1.6	Voluntary conservation agreements	No agreement has been negotiated between NPWS and landowner
1.1.7	Seagrass,	The subject site is not affected by any existing

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	mangroves, saltmarsh and other wetland associated species	SEPP 14, Fish Habitat Protection Plan or Ramsar Wetland Listing controls
1.2.3	Fish habitat modification or alienation	Impacts caused by the proposal can be fully disregarded because of the pronounced buffering capacity of the open sea and the vigour of its rhythmic and turbulent circulation pattern.
1.2.5	Threatened Species Conservation Act	<p>The proposal will: -</p> <ul style="list-style-type: none"> retaining more than 53.5% of the subject land (i.e. 16.7ha) as an untouched bushland and drainage corridor; sensitively developing the residue 46.5% so that pre-development drainage and water quality conditions are matched upstream and downstream of the subject land; include a management strategy to protect the dune and headland areas from exotic weed infestations and uncontrolled pedestrian incursions that may disturb the stability of emerging native vegetation species. <p>Nonetheless, the 46.5% residue of the site may contain species of significance listed under the TSC Act 1995. The extent of impact by the proposal, and the effectiveness of ameliorating measures, is being presently assessed in a Species Impact Statement.</p>
1.3.1	EPA licensing of STP and other point source discharges	No sewage treatment works or other such point sources form part of the development proposal
1.3.2	Non-point	The proposal includes establishing a residential

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	source pollution	estate across part of the subject land, and involves installing a “best management practice” stormwater treatment train with ‘lot scale’ and ‘sub-catchment scale’ components. The treatment train will at least match or improve on pre-development conditions, and will discharge only <u>treated</u> stormwater towards the coastal environment.
1.3.7	Waste water discharges	The proposal includes establishing a residential estate across part of the subject land, and involves connection of the estate to the existing reticulated mains sewerage system that services Emerald Beach township. The sewerage system is expected to cater entirely for the estate’s wastewater disposal needs.
1.3.8	Contaminated stormwater	The proposal includes establishing a residential estate across part of the subject land, and involves installing a “best management practice” stormwater treatment train with ‘lot scale’ and ‘sub-catchment scale’ components. The treatment train will at least match or improve on pre-development conditions, and will discharge only <u>treated</u> stormwater towards the coastal environment.
1.3.12	Vessel sewage pumpout facilities	No vessel facilities form part of the proposal
1.3.13	Re-use of treated biosolids and effluent	The proposal includes establishing a residential estate across part of the subject land, and involves connection of the estate to the existing reticulated mains sewerage system that services Emerald Beach township. The sewerage system is expected to cater entirely for the estate’s wastewater disposal needs.
1.4.5	Assessment of coastline	The land is separated from the beach environment by a dune system that is located

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	development proposals	<p>wholly within a Crown Reserve. The proposed residential estate nestles behind the dune system which provides a significant buffer to coastal hazards. Assessment has concluded that no inundation of the site as a result of coastal processes is expected within a planning period of 100 years. The proposal is consistent with the aim to minimise risks to people and property resulting from coastal processes in that the residential estate will be located beyond a conservatively derived 100-year hazard line.</p> <p>The dune system is presently subject to uncontrolled incursions by pedestrians accessing the beach environment. The proposal's dune management strategy offers improved and controlled accessways across the dune area to enhance existing shoreline usage without altering the existing dune profile. Consequently, the proposal presents no significant alteration to the existing dune system or the coastal processes which maintain the system.</p>
1.4.7	Assessment of estuarine development proposals	<p>The proposal includes: -</p> <ul style="list-style-type: none"> • upgrading the existing highway access across the drainage corridor which involves constructing a 25-cell culvert; and • upgrading the existing bridge across Fiddamans Creek. <p>These components of the proposal will require approvals under the Rivers and Foreshores Improvement Act 1948.</p> <p>During the construction phases, controls will be required to minimise acid sulphate soils and erosion and sedimentation impacts. Provided the controls are implemented and managed as designed, there is not expected to be significant negative environmental impact generated by</p>

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		<p>the construction phase of the development.</p> <p>Flood impact and water quality assessments have indicated the operational phase of the development will not significantly alter the drainage characteristics of the Fiddamans Creek system.</p>
2.1.3	Physical and ecological processes to be considered when assessing DA's	<p>The following physical and ecological processes are considered relevant to the proposal and will be included in the assessment: -</p> <ul style="list-style-type: none"> • impacts on Flora & Fauna; • extent of Bushfire Management required; • maintaining satisfactory Air Quality during construction phases; • generating satisfactory water quality conditions for Fiddamans Creek; • presence and management of Acid Sulphate Soil conditions; • management of prevailing upstream & downstream Drainage conditions; • impacts of Beach Erosion, long-term Shoreline Recession, Climate Change and Oceanic Inundation; • impacts on SEPP 14 Wetland No. 318 and Solitary Islands Marine Park; • impacts on prevailing Local Climate.
2.1.4	Acid sulphate soils	<p>Preliminary assessment has been undertaken which suggests that ASS conditions could be encountered if excavation extends beyond 1.6m below the existing ground surface. It is not expected that disturbance to the existing ground surface will extend to more than 1m below the existing ground surface, which thereby suggests that a buffer of at least 0.6m exists between development works and ASS conditions. Nevertheless, a plan of management for ASS conditions has been devised, and prior to the commencement of construction works further precautionary sampling for ASS</p>

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		<p>conditions shall be undertaken in accordance with the present ASSMAC guidelines as follows: -</p> <ul style="list-style-type: none"> • depths of excavation below the existing ground surface for construction works shall be determined from the engineering design plans; • sampling shall be undertaken, where relevant, to at least those determined depths at the rate of at least 1 sample per 100m x 100m grid cell or 1 sample per 100m interval; • analysis of each sample shall determine whether ASS conditions exist, and the rate of lime application required to neutralise those conditions; • if required, the plan to management for treating ASS conditions (Attachment 6) shall be modified to account for updated analysis.
2.2.2	Sea level change	<p>The land and its context to coastal processes, including sea level change, have been assessed. The assessment has concluded that no inundation of the site as a result of coastal processes and hazards is expected within a planning period of 100 years.</p>
3.2.1	<p>Coastal Design Guideline No. 2.1 for</p> <p>Expanding the boundary of a settlement (p.46)</p>	<p>The proposed development footprint is defined:</p> <ul style="list-style-type: none"> • on the east by the beach dune area which is contained within Crown Reserve No. 93479 for Public Recreation; • on the south by the “Emerald Beach Caravan Park”; • on the west by a bushland corridor which will be retained and managed for drainage and vegetation continuity purposes; • on the north by the commenced caravan park development approved under DA No. 452/82.

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		<p>The proposed development satisfies: -</p> <ul style="list-style-type: none"> • Guideline 1a in offering measures to protect the culturally-significant Diggers Point headland; • Guideline 1b in retaining the existing bushland corridor which represents about 53.5% of the subject land; • Guideline 1c in offering enhanced connection to the existing beach environment; • Guideline 1d in utilising the link to Fishermans Drive and upgrading the Fiddamans Creek bridge; • Guideline 1e in utilising the existing services and infrastructure available to the Emerald Beach settlement; • Guideline 1f in providing an appropriate circulation pattern for existing daily and school bus services and in providing links to existing and proposed shopping opportunities available in the Emerald Beach settlement and the caravan parks; • Guideline 1g in formulating a grid-like lot pattern within a perimeter ring road which provides circulation options from any location within the estate; • Guideline 1i in formulating building envelopes for each lot that ensure solar access to living area opportunities for every other lot; • Guideline 1j in formulating a 'stormwater treatment train' for the estate to achieve, at least, pre-development water quality conditions; • Guideline 1k in providing a permeable circulation pattern within the estate for pedestrians which links to the adjoining beach environment and to shopping opportunities within the Emerald Beach

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		settlement and the adjoining caravan parks.
	<p>Coastal Design Guideline No. 2.2 for</p> <p>The open space network (p.53)</p>	<p>The proposed development satisfies: -</p> <ul style="list-style-type: none"> • Guideline 1a in offering controlled connections across the dune area to the beach and headland; • Guidelines 1c and 2 in retaining the existing bushland corridor connecting the Moonee Nature Reserve system to Fiddamans Creek; • Guideline 3 in that it will be setback beyond the 1 in 100 year planning line for coastal erosion, dwelling sites will be elevated above the predicted 1 in 100 year flood event, and dwelling sites will be setback beyond the required APZ's. • Guideline 4 in retaining the existing bushland corridor which represents about 53.5% of the subject land; • Guideline 5 in offering measures to protect the culturally-significant Diggers Point headland; • Guideline 6 in formulating a 'stormwater treatment train' with open swale and bio-retention elements for the estate to achieve, at least, pre-development water quality conditions; • Guideline 7 in surrounding the estate with a perimeter ring road reserve which includes a pedestrian pathway; • Guideline 8a in offering controlled connections across the dune area to the beach and headland; • Guideline 8c in providing pedestrian access to shopping opportunities at the adjoining caravan parks; • Guidelines 9b & 9c in offering controlled connections across the dune area to the beach which is connected to playground areas adjacent to the Emerald Beach settlement.

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	<p>Coastal Design Guideline No. 2.3 for Protecting the natural edges (p.59)</p>	<p>The proposed development satisfies: -</p> <ul style="list-style-type: none"> • Guideline 1a in recognising the significance of the dune area as a buffer to coastal processes, as a public link to the beach environment, and as both a background and foreground visual amenity; • Guidelines 2 & 19 in locating the perimeter ring road with public carparking along the interface with the dune reserve; • Guideline 3 in retaining the existing bushland corridor which represents about 53.5% of the subject land, and in retaining a setback of at least 35m to lots from the bushland; • Guideline 4 in providing a permeable circulation pattern within the estate for pedestrians which links to the adjoining beach environment; • Guideline 5 in offering a strategy to manage the dune area and provide controlled access across the dune area without altering the existing dune profile; • Guideline 6a in providing a road pattern within the estate that provides direct pedestrian access to the beach environment; • Guideline 7 in offering provision of controlled pedestrian access across the dune in 3 locations where informal accesses exist; • Guideline 8 in providing carparking within the estate along and behind the dune area interface; • Guideline 10 in proposing a low-scale low-density residential estate that is located behind and below the existing beach dune environment; • Guidelines 11, 12, 15 & 16 in locating the estate beyond a 1 in 100 year planning line for coastal processes and hazards; • Guideline 13 in retaining a setback of at least

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		<p>24m to lots from the dune reserve, and at least 120m to lots from the Moonee Nature Reserve;</p> <ul style="list-style-type: none"> • Guideline 14 in retaining setbacks of at least 110m to lots from the beach area and 65m to lots from the peaks of the dune area; • Guideline 18 in retaining a setback of at least 24m to lots from the dune reserve; • Guideline 20 in proposing dwelling envelopes which are limited in height to about the level of the dune ridge; • Guideline 21 in providing wide road corridors (24m at least) along the dune reserve and bushland interfaces which provide a mix of active and passive use opportunities.
	<p>Coastal Design Guideline No. 2.4 for Reinforcing the street pattern (p.67)</p>	<p>The proposed development satisfies: -</p> <ul style="list-style-type: none"> • Guideline 1 in formulating a looped street and block pattern that is consistent with the general pattern established within the Emerald Beach settlement; • Guidelines 2 & 3 in providing a road pattern which provides circulation options for pedestrians and vehicles from any location within the estate; • Guideline 4 in aligning the streets to the topographically-significant dune reserve and bushland interfaces; • Guideline 7 in relying on upgrading existing crossings only of the drainage corridor and of Fiddamans Creek such that pre-development environmental conditions at least are matched; • Guideline 8 in formulating a 'drainage train' with open swale and bio-retention elements for the estate to achieve, at least, pre-development stormwater infiltration conditions; • Guideline 10 in linking the estate to the

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		<p>Emerald Beach settlement area and the caravan parks where the existing and nearby commercial and social opportunities are located;</p> <ul style="list-style-type: none"> • Guideline 11 in proposing a perimeter ring road that separates the estate from the open space areas, and offers the estate bushfire management zones and access to the beach and bushland environments; • Guideline 12 in providing pedestrian thresholds near bus bays to limit fast-moving traffic; • Guideline 14 in integrating a pedestrian pathway system around the estate with connections across the dune area to the beach, which is connected to the Emerald Beach settlement, and with shopping opportunities at the adjoining caravan parks; • Guideline 15 in lining the principal circulation route with, generally, disconnected Tuckeroo sp. tree plantings to provide legibility.
	<p>Coastal Design Guideline No. 2.5 for</p> <p>Design guidelines for appropriate buildings in a coastal context (p.73)</p>	<p>The proposed development satisfies: -</p> <ul style="list-style-type: none"> • Guideline 1 in locating the estate beyond a 1 in 100 year planning line for coastal processes and hazards; • Guidelines 2, 4, 10, 11 & 12 in nominating dwelling envelopes for each lot that accounts for the living space and energy efficiency requirements of every other lot in the estate; • Guidelines 3 & 5 in ensuring that the estate fits the low density requirements of the 2A zone under Coffs Harbour LEP 2000 and of the 'Subdivision' and 'Low Density' DCP's that apply to the land; • Guideline 6 in providing street-front on-grade entries to each lot;

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		<ul style="list-style-type: none"> Guideline 8 in nominating a consistent 6m building line setback for each dwelling envelope; Guideline 9 in nominating dwelling envelopes for each lot that are consistent with the 'Subdivision' and 'Low Density' DCP's that apply to the land and with the built form that currently exists across the Emerald Beach settlement area. The level nature of the site and the estate's location behind and below the dune area ensure that there is insignificant interference to the existing foreground and background visual amenity available from outside the site.
3.2.4	Only developments which do not compromise the natural & cultural values of the area will be permitted on beaches & frontal dunes	No development is proposed for the beach and frontal dune areas.
	Works to protect, restore & rehabilitate beaches & frontal dunes may be permitted where appropriate	The proposal offers to implement a strategy to restore and rehabilitate the dune area.
	Undeveloped headlands will be preserved	The proposed development does not contravene this principle, and offers to implement a strategy to control pedestrian use

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		of the Diggers Point headland.
	Any developments on headlands already developed should be strictly limited to height and scale no greater than existing buildings	No development is proposed for the Diggers Point headland.
	Beaches & waterfront open space will protected from overshadowing	The proposed development is located behind and below the dune area, and presents no overshadowing impact.
	Tall buildings (>14m will not be permitted outside cities, towns & growth centres	No tall buildings are proposed.
	No new development will be permitted to impede public access to the foreshore areas	The proposed development provides a wide road corridor (24m at least) with carparking along the dune reserve interface which facilitates direct public access to the beach environment.

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3.2.5	Siting of navigational aids, marine communication towers, warning signs & moorings	The subject site is not relevant for the purpose of siting such facilities and structures.
4.2.3	Coastal sites of Aboriginal heritage significance	The proposed development offers to implement a strategy to control pedestrian access about the culturally-significant Diggers Point headland and to minimise further disturbance to artefacts.
5.1.11	Ecotourism developments & Guidelines for Tourism Developments adjacent to Natural Areas	The development proposal does not contain any tourism elements.
5.3.3	Aquaculture procedures, permits & guidelines	The development proposal does not contain aquaculture elements.
5.3.4	Development consent for mining	The development proposal does not contain any mining elements.
6.1.4	Canal estate developments	The development proposal does not contain any canal estate elements.
7.1.5	Tourism development & public foreshore access	The development proposal does not contain any tourism elements.
7.2.3	Coastal	Emerald Beach is patrolled during vacation

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	developments & surf life saving facilities	periods.
7.2.4	Surf life saving facilities & s.94 levies	Emerald Beach is patrolled during vacation periods.

4.2.1.5 Cl. 32B(2)(b) Coastal Management Manual

The manual sets out management options where coastline hazards apply. Assessment has disclosed that the development area of the land is entirely located on the landward side of the 1 in 100 year coastal hazard line. To further minimise the likelihood of coastline hazard, the proposal's dune management initiative can be implemented and incorporated as an ongoing maintenance routine administered by the Community Association as part of the estate's responsibilities.

4.2.1.6 Cl. 32B(2)(c) North Coast: Design Guidelines

See Strategic Action No. 3.2.1 assessed above.

4.2.1.7 Cl. 32B(3)

The proposal will provide a public road, including formal carparking areas, along the interface of the subject site with the beach dune area as part of the estate's

principal circulation route. Furthermore, the residential estate layout provides both legible and permeable pedestrian access to the dune area. The beach beyond the dune is presently subject to regular pedestrian use, and a number of uncontrolled accesses are located across and along the dune area and the Diggers Point headland. The dune management strategy attached as Attachment 1 offers improved and controlled accessways across the dune area to protect the dune environment and enhance existing shoreline usage.

The proposal, therefore, enhances, rather than impedes, public access to the foreshore.

4.2.1.8 Cl. 32B(4)

The proposal includes developing a low scale, low-density residential estate. Dwellings erected within the estate will be setback at least 30m from and behind the beach dune area and will be limited to a 6m height.

The proposal, therefore, will not result in the beach or dune environment being overshadowed before 3PM (EST) mid-winter, or 6.30PM (DST) mid-summer.

4.2.1.9 Cl. 33 Coastal Hazard Areas

Coastline Management Manual

The manual sets out management options where coastline hazards apply. Assessment has disclosed that the development area of the land is entirely located on the landward side of the 1 in 100 year coastal hazard line. To further minimise the likelihood of coastline hazard, the proposal's dune management initiative can

be implemented and incorporated as an ongoing maintenance routine administered by the Community Association as part of the estate's responsibilities.

Disturbed Foreshore Areas

The proposal will implement a management strategy to protect the dune and headland areas from exotic weed infestations and uncontrolled pedestrian incursions that may disturb the stability of emerging native coastal vegetation species.

Confined Access across Foredune Areas

The proposal will provide a public road, including formal carparking areas, along the interface of the subject site with the beach dune area as part of the estate's principal circulation route. Furthermore, the residential estate layout provides both legible and permeable pedestrian access to the dune area. The beach beyond the dune is presently subject to regular pedestrian use, and a number of uncontrolled accesses are located across and along the dune area and the Diggers Point headland. The proposal's dune management strategy offers improved and controlled accessways across the dune area to protect the dune environment and enhance existing shoreline usage. The controlled accessways will be provided in three (3) separate locations with 300m separation.

4.2.1.10 Cl. 34 Heritage

The proposal can be justified on the basis of the Heritage objectives, as follows: -

- **The development can ensure that the environmental heritage (including the historic, scientific, cultural, social, archaeological, architectural and aesthetic heritage) of the North Coast region is conserved.**

It is unlikely that archaeological material is present within the development site. Nevertheless, the proposal will include: -

(xiii) the monitoring of groundcover removal by the Coffs Harbour and District Aboriginal Land Council; and

(xiv) in the event of unearthing bones, stone artefacts or discrete distributions of shell, earthmoving operators be aware of the following protocol: -

- cease work in the area affected;
- inform the Coffs Harbour and District Local Aboriginal Land Council; and
- await permission to recommence work in affected area.

The middens located on Diggers Point, outside the development site, have been assessed as the only material of significance that may be affected by the development. To safeguard the middens, it has been recommended that additional barrier poles be installed at the entrances to restrict all but pedestrian access to Diggers Point. The proposal's dune management strategy provides design details for accessways around Diggers Point, whereby pedestrians are confined by fencing to the existing routes consolidated by woodchip.

The development proposal is consistent with the objective to conserve the environmental heritage of the North Coast in that: -

- a management strategy will be implemented to protect the cultural artefacts of high significance from disturbance by unconfined pedestrian incursions; and
 - independent surveillance during the construction phase of groundcover removal within the site will be implemented to ensure that no concealed items of high cultural significance are disturbed.
-
- **The development can ensure that the appreciation and understanding of the North Coast region's distinctive variety of cultural heritage items and conservation areas is promoted.**

The middens located on Diggers Point, outside of the development site, have been assessed as the only material of significance that may be affected by the development because of their exposure and accessibility from uncontrolled pedestrian incursions.

The development proposal is consistent with the objective to promote the appreciation and understanding of the North Coast region's distinctive variety of cultural heritage items and conservation areas in that: -

- opportunities are presented to implement a management strategy to confine general public passage away from the middens, and which enables ongoing inspection by authorised personnel for investigation and conservation purposes.
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- **The development can ensure that the region's historic townscapes, buildings or places of heritage significance are conserved.**

The site contains no townscapes, buildings or places of conservation significance.

4.2.1.11 Cl. 36, 36A & 36B

It is unlikely that archaeological material is present within the development site. Nevertheless, the proposal will include : -

- the monitoring of groundcover removal by the Coffs Harbour and District Aboriginal Land Council; and
- in the event of unearthing bones, stone artefacts or discrete distributions of shell, earthmoving operators be aware of the following protocol: -
 - cease work in the area affected;
 - inform the Coffs Harbour and District Local Aboriginal Land Council; and
 - await permission to recommence work in affected area.

The middens located on Diggers Point, outside the development site, have been assessed as the only material of significance that may be affected by the development. To safeguard the middens, it has been recommended that additional barrier poles be installed at the entrances to restrict all but pedestrian access to Diggers Point. The proposal's dune management strategy provides design details for accessways around Diggers Point, whereby pedestrians are confined by fencing to the existing routes consolidated by woodchip.

4.2.1.12 Cl. 36C

The middens located on Diggers Point, outside of the development site, have been assessed as the only material of significance that may be affected by the

development. To safeguard the middens, additional barrier poles will be installed at the entrances to restrict all but pedestrian access to Diggers Point. The proposal's dune management strategy provides design details for accessways around Diggers Point, whereby pedestrians are confined by fencing to the existing routes consolidated by woodchip.

4.2.1.13 Cl. 43 Residential Development

The 'residential development' component of the proposal will be undertaken such that :-

- (i) the density of dwellings is maximised without adversely affecting the environmental features of the land as created by the proposed earthworks. Earthworks activities involves spreading about 4000cu.m of imported sand fill material across 4.7ha to a depth of 0.7m only. The earthworks can be achieved without adversely affecting environmental features of the land;
- (ii) the road widths are designed in accordance with Schedule 1 of Coffs Harbour Subdivision DCP, Coffs Harbour City Council's Technical Guidelines for Subdivision and Development and the recommendations in AMCORD Edition 2 (Model Code Task Force of the Joint Venture for More Affordable Housing 1990, pp. 46-58 "B6 Transport Networks") where considered appropriate;
- (iii) the road network has been designed to facilitate use by public bus services; and
- (iv) sedimentation and erosion generated by construction works is managed in accordance with an ESCP formulated at the engineering design phase.