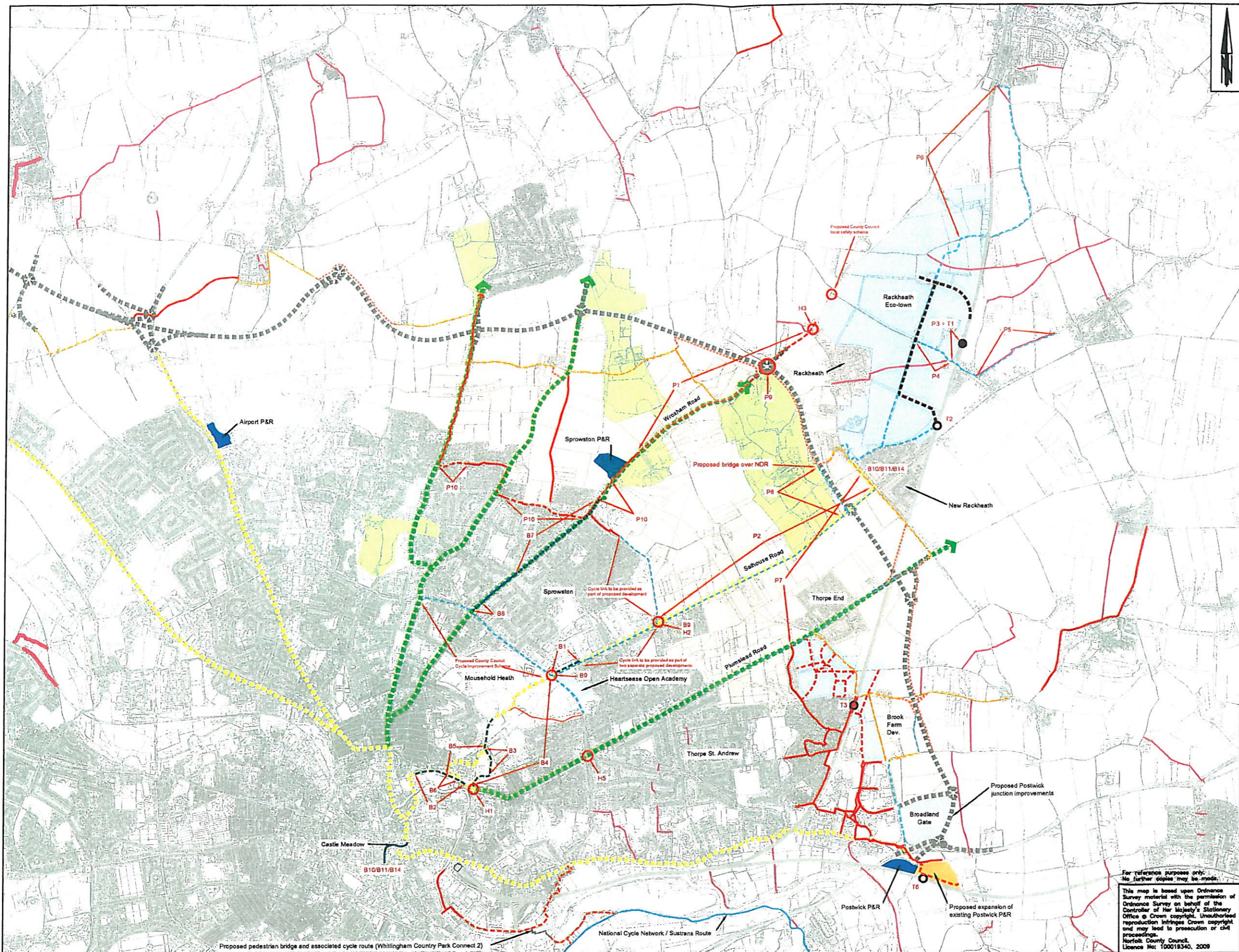


RF46

**Rackheath Eco-Town  
Transport Infrastructure  
Programme of Development**







- Key**
- Existing cycle or shared facilities
  - - - Proposed cycle or shared facilities
  - - - Possible cycle or shared facilities
  - Proposed route of NDR
  - - - Indicative line for possible link road
  - Existing footpaths
  - Existing bus lanes
  - - - Possible bus lanes
  - - - Proposed BRT corridor as suggested in NATS Consultation Leaflet
  - - - Proposed core bus routes as suggested in NATS Consultation Leaflet
  - Existing rail service
  - - - Possible tram train extension within Eco-Town
  - Possible new railway station
  - Existing railway station
  - Possible junction improvement
  - - - Possible on-cameway cycle links following construction of NDR
  - - - Possible bridge/paths to be constructed as part of NDR scheme
  - Proposed Growth Triangle Action Area
  - Proposed known key development areas
  - Area of historic parkland and of landscape value
  - Existing Park & Ride facilities
  - Proposed Park & Ride facilities
  - P1 Possible Project (Refer to Programme of Development)

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REV.	DESCRIPTION	CHECKED	DATE

INITIALS	DATE	DRAWING No.
OS	2009	PR3310-GP-001
MA/MK	10/09	PROJECT TITLE
JG	10/09	Rackheath Eco-town
MAK	11/09	Transport Infrastructure Study
		SCALE 1:20000
		FILE No. PR3310





Ref No	Location	Description	Works Cost	Land Cost	Utilities Cost	Fees	Total Scheme Cost	Funding (Capital/Revenue)	Timescale (minimum)	Dependencies	Benefits	Disbenefits
<b>Bus</b>												
B1	Salhouse Road (Woodside Road to ORR)	Inbound bus lane	£330,000	To be determined	To be determined	Included in works	£330,000	Capital	Post 2014	Dependant on NDR	Improve journey times and decrease journey time variability	Vehicles in near side bus lane may experience difficulty maneuvering into the middle lane to go straight ahead. 4 lanes of traffic would be required to maintain the right lane into business park. This would require the loss of all verge and the central refuge at this location. Loss of capacity in left turn lane at junction to allow bus lane to extend closer to junction. Land acquisition may be necessary.
B2	Barrack Street	Inbound bus lane on approach to Whitefriars Roundabout	£330,000	Potential earthworks outside highway boundary	To be determined	Included in works	£330,000	Capital	Post 2014	Dependant on NDR	Improve journey times and decrease journey time variability	Provision of bus lane would require the removal of the new cycle/pedestrian crossing facility at junction with Silver Road, which forms part of a cycle link that will include a new bridged river crossing. Significant amount of utilities in both northern and south footways, including BT, Cable Television and Anglian Water. Scheme would require removal of two central refuges and pedestrian crossing facilities at junction with Silver Road that were installed in 2007.
B3	Gurney Road (adjacent to Prison)	Bus gate on Gurney Road to create bus only route	£30,000			Included in works	£30,000	Capital	Post 2014	Dependant on NDR	Provide congestion-free route to the IRR and improve the perception of bus travel and create quicker and more reliable journeys for buses	Busgate would impact on access to buildings to the East including the Young Offenders Institute, Mons Avenue and Beech Drive. Access to these areas would need to be diverted via Plumstead Road and the narrow residential street Britannia Road. The reduction in traffic volume could result in anti-social behaviour through Mousehold heath. Potential for rat-running on unsuitable roads.
B4	Gurney Road to Barrack Street	Bus only link from Gurney Road to Heathgate, north of Mousehold Street (Alternative to B3)	Still to be determined				Still to be determined	Capital	Post 2014	Dependant on NDR		
B5	Gurney Road to Barrack Street	Bus only link from Gurney Road to Mousehold Street/St James Close (Alternative to B3)	Still to be determined				Still to be determined	Capital	Post 2014	Dependant on NDR		
B6	Gurney Road to Barrack Street	Bus only link from Cannell Green to Barrack Street with signal controlled right turn into Barrack Street at existing toucan crossing (Alternative to B3)	Still to be determined				Still to be determined	Capital	Post 2014	Dependant on NDR		
B7	A1151 Wroxham Road, near Park and Ride	Bus lane extension towards Park and Ride from existing inbound facility south of junction with Russell Avenue.	£120,000			Included in works	£120,000	Capital	Post 2014	Dependant on NDR	Improve journey times and decrease journey time variability, particularly for Sprowston P&R.	
B8	A1151 Wroxham Road, ORR junction	Reduce delays for buses by either extending existing bus lane closer to ORR or providing bus gate on the approach to the junction. With both options extend operation hours to 24hrs to allow bus lane to be fully effective	Still to be determined				Still to be determined	Capital	Post 2014	Dependant on NDR	Improve journey times and decrease journey time variability, particularly for Sprowston P&R.	Could decrease capacity of roundabout and result in loss of existing on-street parking spaces.
B9	Salhouse Road (Blue Boar Lane/Woodside Road junction and ORR junction)	Traffic Signal Priority (Selective Vehicle Detection).	£10,000				£10,000	£3,000 Capital £7,000 Revenue	2010/11	Bus service between Rackheath and central Norwich	Short term scheme to allow speedier access to the city centre than that which would be experienced via Wroxham Road. Potential to allow Park and Ride to support new bus services and increase overall bus operational efficiency.	
B10/11	Bus Infrastructure for Salhouse Road corridor	Provision of 3 buses estimated at £250,000 each for alternative-fuelled vehicle. Provision of upgraded infrastructure to support the introduction of the high quality service along Salhouse Road, including the installation of high quality shelters including RTI at key locations making bus stops and shelters nicer places to wait.	£1,800,000				£1,800,000	Capital	2010/11	First occupation at Eco-town and Project B14		
B12/13	Bus service between Rackheath, Norwich Airport Industrial Estate and Broadland Business park	Revenue support for the establishment of either a conventional orbital bus service between Rackheath, the Airport Industrial Estate and the Broadland Business park or a Demand Responsive Transport service	£3,060,000				£3,060,000	£80,000 Capital £2,980,000 Revenue	2010/11	First occupation at Eco-town	Provides 'pump-priming' for new bus services.	
B14	Bus service between Rackheath and central Norwich	Revenue support for the establishment of a high quality and environmentally friendly bus service between Rackheath and central Norwich	£2,120,000				£2,120,000	Revenue	2010/11	First occupation at Eco-town and Project B10/11	Provides 'pump-priming' for new bus services.	
<b>Walking/Cycling</b>												
P1	A1151 Wroxham Road, from Sprowston Manor Hotel to Green Lane, Rackheath	Shared use facility from existing facility by Sprowston Manor	£800,000				£800,000	Capital	2010/11	Land acquisition required.		Large impact on established trees and hedgerows along the carriageway edge which would require removal.
P2	Salhouse Road, from Rackheath eco-town to junction with Blue Boar Lane	Shared use facility and considered modifying existing roundabout at Green Lane West to improve conditions for cyclists	£1,950,000	Included in works	Included in works	Included in works	£1,950,000	Capital	2010/11	Land acquisition required.		The scheme would require land acquisition and have a large impact established trees and hedgerows along the carriageway edge which would require removal.
P3	Existing Salhouse railway station	Access improvements to avoid low bridge for buses and improve pedestrian/cycle links	£200,000				£200,000	Capital	2010/11	Proposed relocation of station as part of Eco-Town		Any plan to relocate Rackheath railway station as part of eco-town development would render these works abortive.
P4	Existing Salhouse railway station to eco-town	Develop pedestrian/cycle link between railway station and eco-town	Still to be determined				Still to be determined	Capital	2010/11	Proposed relocation of station as part of Eco-Town		Any plan to relocate Rackheath railway station as part of eco-town development would render these works abortive.
P5	Salhouse. From Station Road, Rackheath to Mill Road, Salhouse	Upgrade approx. 1225 metres of downgraded bridleway to shared use facility	£151,500			Included in works	£151,500	Capital	2010/11		Provides link between Salhouse and western side of eco-town.	The scheme would require land acquisition.
P6	Eco-town to Wroxham via Stonehouse Road and Salhouse Road	Develop pedestrian/cycle link between eco-community and Wroxham	£800,000	Included in works		Included in works	£800,000	Capital	2010/11	Dependant on progress of eco-town.	Provides link between Wroxham and eco-town.	The scheme would require land acquisition and removal of trees. The existence of established trees and hedgerows along the carriageway edge would require the route to deviate from the carriageway edge.



Ref No	Location	Description	Works Cost	Land Cost	Utilities Cost	Fees	Total Scheme Cost	Funding (Capital/Revenue)	Timescale (minimum)	Dependencies	Benefits	Disbenefits
P7	Plumstead Road cycle link between Broad Lane and Dusindale Drive	Develop pedestrian/cycle link between Green Lane East and existing facility on Dusindale Drive	Still to be determined				Still to be determined	Capital	2010/11		Provides link along Plumstead Road to develop route between eco-community and Broadland Business Park.	
P8	Cycle link between proposed bridge at Newman Road over the NDR and Salhouse Road	Develop link between the bridge across the NDR and Salhouse Road	Still to be determined				Still to be determined	Capital	Post 2014	Dependant on NDR	Provides an alternative to the proposed facility along Green Lane and Salhouse Road, allowing cyclists an access to the proposed Salhouse Road facility bypassing the proposed NDR Salhouse Road roundabout.	
P9	Proposed bridge over NDR at Wroxham Road	Non motorised user bridge over NDR to link facilities on Wroxham Road	£2,000,000				£2,000,000	Capital	Post 2014	Dependant on NDR	Would allow pedestrians and cyclists to safely bypass the proposed NDR Wroxham Road roundabout.	
P10	Old Catton to Sprowston - White Women Lane, Barkers Lane, Church Lane and Wroxham Road	Complete missing cycle links with shared use facilities	£450,000	Included in works		Included in works	£450,000	Capital	Post 2010		Joins up sections of existing shared facilities.	
<b>Highway</b>												
H1	Ketts Hill Roundabout	Widen Ketts Hill approach	Still to be determined				Still to be determined	Capital	2010/11		Improve left turn bus movement into Riverside Road	Potential impact on existing trees and parking
H2	Salhouse Road (Blue Boar Lane/Woodside Road junction)	Junction upgrade scheme	£600,000				£600,000	Capital	2010/11			
H3	A1151 Wroxham Road/Green Lane West, Rackheath	Dedicated right turn lane or roundabout	£2,000,000				£2,000,000	Capital	2010/11	Dependant on NDR and progress of eco-town. Land acquisition required.	The scheme aims to reduce accidents and improve access to Rackheath Industrial Estate to cater for the increase in traffic heading northbound and turning right into Green Lane West due the eco-town development and NDR.	Options developed as part of feasibility study identified the need for land acquisition, removal of established trees and hedgerows along the carriageway edge, and the presence of utility apparatus.
H4	Improvements required as a result of the level crossing closures on Green Lane East and Plumstead Road	Still to be determined	Still to be determined				Still to be determined	Capital	?	Dependant on progress of eco-town.		
H5	Heartsease Roundabout	Enlarged roundabout to provide capacity improvement	£3,000,000	Included in works	Included in works	Included in works	£3,000,000	Capital	2010/2011		Increased capacity of junction. Improved pedestrian crossing facilities.	The scheme would require land acquisition.
H6	Norwich Northern Distributor Road including Postwick Hub improvement	New road to distribute traffic around the north of Norwich and link with the A47 and A11 trunk roads. This, together with enforcement measures where necessary, will help to stop traffic using unsuitable suburban and rural roads and reduce congestion on other main roads.					£127.2m	Capital	2010-2015	DfT Programme Entry Planning Permission		
<b>Tram/Train</b>												
T1	Existing Salhouse railway station	Improvements to railway station	Still to be determined				Still to be determined	Capital	2010/11	Dependant on progress of eco-town.		
T2	New Salhouse railway station to south of existing station	Replacement to railway station	Still to be determined				Still to be determined	Capital	Longer term aspiration	Dependant on progress of eco-town.		
T3	New Broadland Business Park railway station		Still to be determined				Still to be determined	Capital	Longer term aspiration			
T4	Tram train	Feasibility Study	Still to be determined				Still to be determined	Revenue	Longer term aspiration			
T5	Tram train	Implementation	Still to be determined				Still to be determined	Capital	Longer term aspiration			
T6	New Postwick railway station		Still to be determined				Still to be determined	Capital	Longer term aspiration			
T7	Additional railway stations on Bittern Line rail corridor		Still to be determined				Still to be determined	Capital	Longer term aspiration			
T8	Enhanced rail service on Bittern Line	Provision of an additional train unit on the Bittern Line between North Walsham and Norwich to provide an additional hourly service	Still to be determined				Still to be determined	Revenue	2012-2014	No dependencies.	Provides 'pump-priming' for additional train service on existing infrastructure. Benefits to both North Walsham and Wroxham.	Not within next 2 years although this may be able to be brought forward due to cascading of older diesel stock from other parts of the country.
<b>Planning</b>												
R1	North-east quadrant	Operational traffic modelling for Salhouse Road BRT corridor				£50,000	£50,000	Revenue	2009/10 onwards			
R2	Rackheath existing village community Area Wide Travel Plan	Smarter choice study and implementation				£115,000	£115,000	Revenue	2010/2011 onwards	Dependant on progress of eco-town.		
R3	Eco-town Programme of Development	Initial work to support preparation of Eco-town Programme of Development				£25,000	£25,000	Revenue	2009/10			